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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KENJI OSE

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Appeal 2009-002147  
Application 09/992,597  
Technology Center 3600

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Before EDWARD C. KIMLIN, CHUNG K. PAK, and  
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

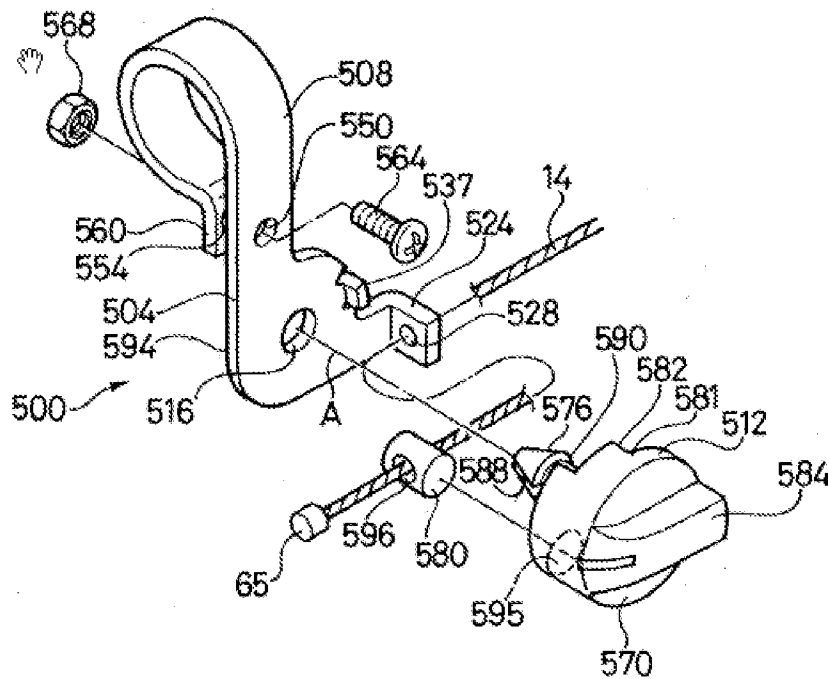
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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision<sup>2</sup> finally rejecting claims 34-37, 40, 41, 43-47, 49-55, 61-65, 73, and 74.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

The invention is directed to a bicycle transmission shift control device ("shifter") in the nature of a switch. (Spec.<sup>4</sup> 1:6-7.) The appealed claims are directed to an embodiment of the shifter shown in Fig. 13 below (*see* App. Br. 2-4):



**FIG. 13**

FIG. 13 is an exploded view of a shift control device 500 which includes a base member 504, an attachment band 508 for attachment to a

<sup>2</sup> Final Office Action ("Final") mailed June 28, 2005.

<sup>3</sup> Appeal Brief ("App. Br.") filed June 14, 2006.

<sup>4</sup> Specification filed Nov. 14, 2001.

bicycle handlebar 12 (*see* FIG. 1), and a shift dial 512. (Spec. 13:20-23.) Shift dial 512 includes a substantially circular dial portion 570 and a pivot shaft 576 for rotation around axis A defined by pivot shaft 576. (Spec. 14:1-2.) “Pivot shaft 576 includes a slot 588 and a locking abutment 590 so that pivot shaft 576 may be compressed to allow locking abutment 590 to pass through pivot opening 516 in base member 504.” (Spec. 14:7-9.) A finger contact projection 584 extends from dial portion 570 in a direction of axis A away from base member 504. (Spec. 14:4-5.) Finger contact projection 584 also extends diametrically across dial portion 570 in a direction generally perpendicular to rotational axis A. (Spec. 14:6-7.)

Shift control device 500 sets shift dial 512 in one of two positions: a cable released position, wherein counterclockwise rotation of shift dial 512 is limited by contact between a motion stop 537 and a limit stop 583, and a cable pulled position, wherein clockwise rotation of shift dial 512 is limited by contact between motion stop 537 and limit stop 582. (Spec. 14:15-19.)

The Examiner maintains, and Appellant requests review of (App. Br. 4), the following grounds of rejection:

1. Claims 34-37, 43-47, 49-52, 73, and 74 under 35 U.S.C. § 102(b) as anticipated by Higuchi<sup>5</sup> (Ans.<sup>6</sup> 3-5);
2. Claims 34-37, 40, 41, 44, 49-51, 53, 61-65, 73, and 74 under 35 U.S.C. § 103(a) as unpatentable over Wechsler<sup>7</sup> in view of Higuchi and Knop<sup>8</sup> (Ans. 6-9); and

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<sup>5</sup> WO 92/19488 A1, published Nov 12, 1992. The Examiner relies on the English Abstract and drawings (*see* Ans. 3-5). A full English language translation is not of record.

<sup>6</sup> Examiner’s Answer mailed Oct. 4, 2006.

<sup>7</sup> US 3,965,763, issued Jun. 29, 1976.

3. Claims 54 and 55 under 35 U.S.C. § 103(a) as unpatentable over Wechsler in view of Higuchi and Knop<sup>9</sup> as applied to claims 34, 36, and 37, and further in view of White<sup>10</sup> (Ans. 10).

With respect to the first two grounds of rejection, Appellant presents arguments in support of patentability of independent claims 34 and 73. Appellant does not advance separate arguments in support of any of the dependent claims. Accordingly, the remaining claims subject to the first and second grounds of rejection stand or fall with claim 34, from which they depend. Appellant has not presented separate arguments in support of patentability of claim 55, which depends from claim 54. Accordingly, we decide the third ground of rejection on the basis of claim 54.

*Rejection of claims 34-37, 43-47, 49-52, 73, and 74  
under 35 U.S.C. § 102(b) as anticipated by Higuchi*

Claim 34 is reproduced below from the Claims Appendix to the Appeal Brief:

34. A bicycle shift control device comprising:

a base member;

an attachment band extending from the base member,  
wherein the attachment band is structured to surround a  
handlebar;

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<sup>8</sup> US 3,766,793, issued Oct. 23, 1973.

<sup>9</sup> The Examiner does not explicitly cite Knop in the statement of the rejection. (Final 8; Ans. 10.) We view this as harmless error since it is clear that the rejection of claims 54 & 55 is based on the second ground of rejection. (*See id.* (“as applied to claims 34, 36, and 37”).)

<sup>10</sup> US 3,398,600, issued Aug. 27, 1968.

a rotatable dial coupled to the base member for rotation coaxially around a rotational axis, wherein the rotatable dial is exposed to the outside;

wherein the rotatable dial is not structured to surround a handlebar so as to rotate coaxially around the handlebar;

a motion limiting structure coupled to the base member and to the rotatable dial that limits a range of rotation of the rotatable dial relative the base member to a predefined arc;

a finger contact projection extending from the rotatable dial in a direction of the rotational axis;

wherein the finger contact projection is structured to prohibit the extension of a finger between all portions of the finger contact projection and the rotatable dial;

wherein the finger contact projection is structured such that the shift control device is operated by placing two fingers or a finger and a thumb on opposite sides of the finger contact projection such that the rotational axis is sandwiched between the two fingers or the finger and the thumb;

wherein the finger contact projection protrudes radially inwardly from a radially innermost outer peripheral surface of the dial so that the shift control device is operated by grasping the finger contact projection with the two fingers or the finger and the thumb radially inwardly from the radially innermost outer peripheral surface;

wherein the finger contact projection extends in close proximity to the rotational axis;

a shift element coupler disposed with the rotatable dial;  
and

wherein the finger contact projection is coupled to the rotatable dial so that rotation of the finger contact projection

correspondingly rotates the rotatable dial to move the shift element coupler and thereby operate the shift control device.

The issue presented for our review with respect to the first ground of rejection is: did the Examiner reversibly err in finding that Higuchi discloses “a finger contact projection” as claimed in claims 34 and 73?

Fig. 1 of Higuchi is reproduced below:

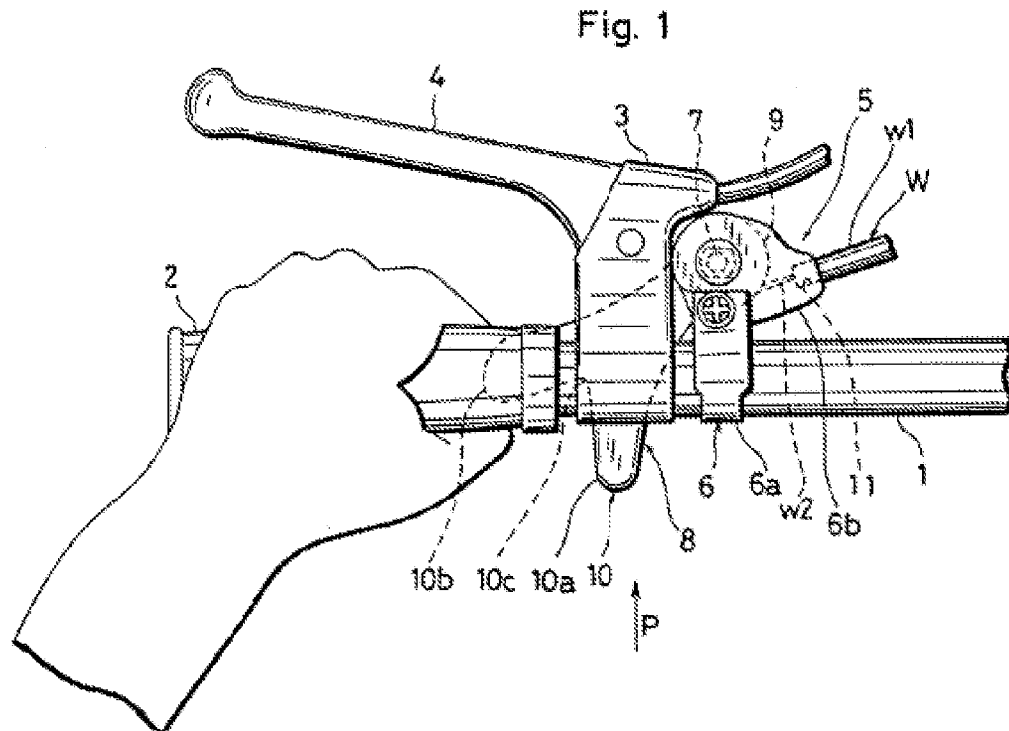


Fig. 1 shows a bicycle shifter comprising “a control lever [8] having a tubular body portion [9] and a control lever arm portion [10] extending radially outwardly from the outer circumference of the tubular body portion [9].” (Abstract.)

The Examiner finds that the claim limitations associated with the “finger contact projection” (claims 34 and 73) read on Higuchi’s control lever 8. (*See Ans. 4.*) Appellant argues control lever 8 is not structured for

use in the manner claimed, i.e., the position of the lever in Higuchi's shifter is not such that it cannot be operated by grasping it by the fingers or a finger and thumb in the manner recited in claims 34 and 73. (App. Br. 5.) In this regard, Appellant contends that "[t]he ordinary method of using the device is to contact one of the forked portions (10a) or (10b) with the thumb and/or finger" (App. Br. 5). The Examiner does not disagree with this statement. (See Ans. 10-12.) However, the Examiner contends it is "possible to use the thumb and the index finger to wrap around the dial portion 9 and engage the thumb on one side of the finger contact projection 8 and the index finger on the other side of the projection 8" such that Higuchi's rotational axis 7 would be "sandwiched between two fingers" as required by claims 34 and 73. (Ans. 11.)

"The mere fact that a certain thing may result from a given set of circumstances is not sufficient" to establish inherent anticipation. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted) ("The Board's theory that these two fastening devices in Wilson were capable of being intermingled to perform the same function as the third and first fastening elements in claim 76 is insufficient to show that the latter device was inherent in Wilson. Indeed, the Board's analysis rests upon the very kind of probability or possibility-the odd use of fasteners with other than their mates-that this court has pointed out is insufficient to establish inherency.")

Appellant has persuasively argued that the Examiner failed to establish a prima facie case of anticipation because the Examiner's rejection is based on an erroneous finding that Higuchi discloses "a finger contact projection" as claimed in claims 34 and 73. The Examiner's rejection is



based on an unsupported theory that Higuchi's shifter could be used in a manner which significantly differs from the intended mode of operation. Based on Appellant's explanation regarding the conventional operation of the type of shifter disclosed in Higuchi, and an analysis of Higuchi Fig.1, the Examiner's proposed method of operating Higuchi's shifter would appear to be completely impracticable. In other words, the Examiner's rejection is based on probabilities and possibilities, which are insufficient to establish a prima facie case of anticipation. Accordingly, we reverse the rejection of claims 34-37, 43-47, 49-52, 73, and 74 under 35 U.S.C. § 102(b) as anticipated by Higuchi.

*Rejection of claims 34-37, 40, 41, 44, 49-51, 53,  
61-65, 73, and 74 under 35 U.S.C. § 103(a) as unpatentable  
over Wechsler in view of Higuchi and Knop*

Appellant does not dispute the Examiner's findings with respect to the teachings of Wechsler, Higuchi, and Knop (Ans. 6-9). (App. Br. 6-7.) Nor does Appellant disagree that the Examiner's proposed combination would result in a device as claimed in claims 34 and 73. Rather, the sole issue presented for our review is: did the Examiner provide a reasonable basis for concluding that it would have been obvious to have modified the rotatable dial (drum 22) of Wechsler's gear shift mechanism with a finger contact projection as taught by Knop to achieve the claimed invention?

The Examiner maintains "[i]t would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the dial of Wechsler with the dial having the vertically extending finger contact projection as taught by Knop in order to provide a more ergonomic knob that can be turned with more ease." (Ans. 9.) Appellant argues the Examiner

has “no basis to make such an assertion” and that the proposed modification would alter the contact points between a user’s fingers and Wechsler’s dial in a manner which would be undesirable. (App. Br. 7.)

“[W]hile an analysis of obviousness always depends on evidence that supports the required *Graham* factual findings, it also may include recourse to logic, judgment, and common sense available to the person of ordinary skill that do not necessarily require explication in any reference or expert opinion.” *Perfect Web Technologies, Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1329 (Fed. Cir. 2009). “Common sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007).

In the Response to Argument section of the Answer, the Examiner provided a detailed explanation as to why a person of ordinary skill in the art, having certain physical limitations or simply preferences, would have viewed Knop’s finger contact projection as more desirable than Wechsler’s dial, e.g., because of comfort or ease of use. (Ans. 12-13.) We find the Examiner provided a reasonable basis for concluding that one of ordinary skill in the art would have been motivated to modify Wechsler’s dial to include a vertically extending finger contact projection as taught by Knop. Appellant has not attempted to refute, or otherwise object to, the explanation provided by the Examiner in the Response to Argument (*see generally* Rep. Br.) and, therefore, has not persuaded us of reversible error in the Examiner’s conclusion that claims 34 and 73 are unpatentable over the combined teachings of Wechsler, Higuchi, and Knop.

Accordingly, we affirm the rejection of claims 34-37, 40, 41, 44, 49-51, 53, 61-65, 73, and 74 under 35 U.S.C. § 103(a) as unpatentable over Wechsler in view of Higuchi and Knop.

*Rejection of claims 54 and 55 under 35 U.S.C. § 103(a) as unpatentable over Wechsler in view of Higuchi and Knop as applied to claims 34, 36, and 37, and further in view of White*

Claims 36, 37, and 54 are reproduced below from the Claims Appendix to the Appeal Brief:

36. The device according to claim 34 wherein at least one of the dial and the base member includes a coupling projection for coupling the dial to the base member.

37. The device according to claim 36 wherein the coupling projection is disposed on the dial and extends into an opening in the base member.

54. The device according to claim 37 wherein the coupling projection includes a slot that allows the coupling projection to be compressed.

With respect to this ground of rejection, we consider the following issue: is the Examiner's proposed motivation for modifying the coupling projection of Wechsler's shifter (as modified in view of Higuchi and Knop) to include a slot and a locking abutment based on an erroneous finding that one of ordinary skill in the art would have anticipated achieving the same benefits realized by the use of this type of coupling projection in White's device (*see* Ans. 10)?

Appellant argues White's projection does not have a strong enough structure to withstand the shearing forces created in Wechsler's shifter. (App. Br. 7-8.) The Examiner responds by asserting that the ordinary artisan

would have had the skills and knowledge necessary to modify White's projection, e.g., by using stronger materials (Ans. 14), so as to avoid the potential problems identified by Appellant (App. Br. 8). Appellant has not refuted this finding. (*See generally*, Rep. Br.)

“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *See KSR*, 550 U.S. at 417.

In our view the Examiner's findings and conclusions are sufficient to establish a prima facie case of obviousness. Appellant has not identified error in these findings and conclusions. Appellant has not shown that the Examiner's proposed modifications would not have been within the level of skill of the ordinary artisan. Accordingly, we are not persuaded of reversible error in the Examiner's obviousness determination as to claims 54 and 55.

We affirm the rejection of claims 54 and 55 under 35 U.S.C. § 103(a) as unpatentable over Wechsler in view of Higuchi and Knop as applied to claims 34, 36, and 37, and further in view of White.

In conclusion, the Examiner's decision to reject claims 34-37, 40, 41, 44, 45, 49-51, 53-55, 61-65, 73, and 74 is affirmed. However, the Examiner's decision to reject claims 43, 46, 47, and 52 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

**AFFIRMED-IN-PART**

Appeal 2009-002147  
Application 09/992,597

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